UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,540	10/12/2001	Genady Grabarnik	YOR920010746US1	1483

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EXAMINER
FRINK, JOHN MOORE

ART UNIT	PAPER NUMBER
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2008*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7 and 19* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *7 and 19* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
         1.☐ Certified copies of the priority documents have been received.
         2.☐ Certified copies of the priority documents have been received in Application No. _____.
         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 4/22/2008 have been fully considered but they are

not persuasive.

2.   Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount

to a general allegation that the claims define a patentable invention without specifically

pointing out how the language of the claims patentably distinguishes them from the

references.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cookmeyer et al. (US 6,529,954 B1), hereafter Cookmeyer, in view of Ma et al. (Mining

Event Data for Actionable Patterns, 2000), hereafter Ma.

5.   Regarding claim 7, Cookmeyer shows a computer-based method of providing

decision support to an analyst in accordance with an event management system

(Abstract) which manages a network with one or more computing devices (Figs. 2 and

7), the apparatus comprising

        at least one processor operative to perform: (i) an automated offline analysis of

data representing past events associated with the network of computing devices being

managed by the event management system (Figs. 8 and 28 and col. 21 lines 44 - 55,

where the data source is a locally held log of network events, stored on a 'C:' local hard

drive, and where the 'analyzer' is a local, non-network device connected to the host

machine over a local bus (col. 7 lines 18-22), thus containing no 'online'

activity/analysis), the automated analysis comprising generation of one or visualizations

of one or more portions of the past even data and discovery of one or more patterns in

the past even data (Figs. 8, 18, 21-23 and 28, and col. 22 line 61 - col. 23 line 7); and

(ii) automated rule offline management comprising construction and validation of one or

more rules (col. 12 lines 33-67 and col. 13 lines 3-20; where rule creation/customization

is done on the host machine and where executed code is 'downloaded' from the host to

the analyzer (col. 8 lines 25-30) as an offline operation as this 'download' is over a local

parallel bus (col. 7 lines 20-25 and Fig. 2, where item 26=host, item 27=parallel cabel

and item 28=analyzer) formed in accordance with the automated offline analysis of the

past even data (col. 21 lines 44-55 and Fig. 14), wherein one or more rules are

constructed offline and validated offline based directly on at least a portion of the one or

more visualizations generated offline (col. 1 lines 50-67 and col. 22 lines 13-33; where

rules can be created and constructed by users) from the corresponding offline analysis

of the one or more portions of the past even data and the offline discovery of at least a

portion of the one or more patterns in the past event data (col. 13 line 5 - col. 14 line 20

and col. 12 lines 28-30); and

memory, coupled to at least the one processor, which stores at least a portion of

results associated with the automated offline event analysis and offline rule

management operations (col. 26 lines 36-44 and col. 10 lines 26-28);

wherein past event data is obtained from an event database and the one or more

rules are provided to a rule database, the even database and the rule database being

associated with an execution system of the event management system (col. 25 lines 37-

43).

wherein generation of the one or more visualizations of the one or more portions

of the past even data further comprises shows selecting a subset of the past even data

from the event database, generating a visualization of the subset of past even data

using a visualization tool, the analyst reviewing the visualization to determine whether

there are any groupings of events that are of interest presented therein, and performing

an appropriate action where an event grouping of interest is found (col. 22 line 61 – col.

23 line 7, col. 23 lines 40 - 60, and col. 24 lines 44 - 64).

Cookmeyer also shows selecting a subset of the past event data from the event

database (col. 22 line 61 – 23 line 7 and col. 24 lines 44 - 64), generating a visualization

of the one or more patterns using a visualization tool (col. 22 lines 50 - 63 and col. 24

lines 44 - 64), the analyst reviewing the visualization to determine whether there are any

patterns of interest presented therein (col. 22 lines 50 - 63 and col. 24 lines 44 - 64),

and performing an appropriate action where a pattern of interest is found (col. 24 lines

44 – 64).

Cookmeyer does not show wherein discovery of the one or more patterns in the

past event data further comprises mining a subset of the past even data to discover one

or more patterns using a mining tool;

wherein validation of the one or more rules further comprises selecting a subset of the past event data from the event database, finding one or more instances of patterns expressed in terms of left-hand side rules, generating a visualization of the one or more pattern instances using a visualization tool, analyzing the left-hand side rules using a rule validation tool, displaying the results of the analysis operation, the analyst assessing the analysis results, and making the rules as one of validated and not validated based on the assessment of the analyst;

wherein construction of the one or more rules further comprises selecting a subset of the past event data from the event database, mining the subset of the past event data to discover the one or more patterns using a mining tool, assessing significance of the one or more patterns using a visualization tool, constructing the one or more rules from a selected subset of the one or patterns using a rule construction tool, and writing the one or more rules in a rule database.

Ma shows wherein discovery of the one or more patterns in the past event data further comprises mining a subset of the past even data to discover one or more patterns using a mining tool (pg. 4 section 2, algorithm 1);

wherein validation of the one or more rules further comprises selecting a subset of the past event data from the event database (Ma, pg. 4, paragraphs 3 and 4), finding one or more instances of patterns expressed in terms of left-hand side rules (Ma, pg. 2, paragraphs 2 and 3), generating a visualization of the one or more pattern instances using a visualization tool (Ma, pg. 2, paragraphs 3 and 4), analyzing the left-hand side

rules using a rule validation tool (Ma, pg. 1, Fig. 1), displaying the results of the analysis

operation (Ma, Fig. 3), the analyst assessing the analysis results (Ma, pg. 3, 1st

paragraph) and making the rules as one of validated and not validated based on the

assessment of the analyst (Ma, pg. 9, Fig. 6);

wherein construction of the one or more rules further comprises selecting a

subset of the past event data from the event database (Ma, pg. 6, paragraph 2), mining

the subset of the past event data to discover the one or more patterns using a mining

tool (Ma, pg. 6 paragraph 3), assessing significance of the one or more patterns using a

visualization tool (Ma, pg. 2, paragraph 3 and pg. 3 paragraph 2), constructing the one

or more rules from a selected subset of the one or patterns using a rule construction

tool (Ma, pg. 3, paragraph 3), and writing the one or more rules in a rule database (Ma,

Fig. 1 and pg. 2 paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the disclosure of Cookmeyer with that of Ma in order to improve the

ability to identify patterns in enterprise event management (Ma, pg. 3, bottom right),

thus improving the ability of Cookmeyer's disclosure to identify, diagnose and give

advice to solve problems (as Cookmeyer's ability to identify and provide solutions to

problems is based on identifying patterns).

6.   Regarding claim 19, Cookmeyer in view of Ma further show an event

management decision support system for providing decision support to an event

management system which manages a network with one or more computing devices

(Cookmeyer, Abstract, Figs. 2 and 4, and Ma, Fig. 1), the system comprising:

an event analysis module, further comprising an event mining module (Ma, Fig.

1) and an event visualization module (Cookmeyer col. 21 lines 44-55 and Figs. 8 and

28) wherein the event module discovers patterns in event data, and wherein the event

visualization module provides a mechanism for visualizing at least a result of a pattern

discovery and rule analysis (Ma, pg. 8 and Cookmeyer Figs. 8, 18, 21-23 and 28, col.

22 line 61 - col. 23 line 7); and

a rule management module, further comprising a rule validation module and a

rule construction module (Cookmeyer col. 12 lines 33 – 67 and col. 14 lines 3 - 20),

wherein the rule validation module maintains consistency of at least a rule with the even

data, and wherein the rule construction module provides a mechanism for constructing

one or more rules based on event patterns mined by the event mining module

(Cookmeyer, col. 13 line 5 - col. 14 line 20 and col. 12 lines 28 - 30 and Ma, Fig. 1),

wherein one or more of the rules are constructed offline by the rule construction

module and validated offline by the rule validation module based directly on at least a

portion of the one or more visualizations generated offline by the event visualization

module from the corresponding offline analysis of the one or more portions of the event

data and the offline discovery of at least a portion of the one or more patterns in the

event data by the event mining module (Ma, pg. 2 paragraph 3 and 4, pg. 3 paragraph 3

and Cookmeyer col. 12 lines 50 – 67 and col. 22 lines 13 - 33);

wherein past event data is obtained from an event database and the one or more

rules are provided to a rule database, the even database and the rule database being

associated with an execution system of the event management system (Cookmeyer;

col. 25 lines 37-43).

wherein generation of the one or more visualizations of the one or more portions

of the past even data further comprises shows selecting a subset of the past even data

from the event database, generating a visualization of the subset of past even data

using a visualization tool, the analyst reviewing the visualization to determine whether

there are any groupings of events that are of interest presented therein, and performing

an appropriate action where an event grouping of interest is found (Cookmeyer; col. 22

line 61 – col. 23 line 7, col. 23 lines 40 - 60, and col. 24 lines 44 - 64)

wherein the discovery of the one or more patterns in the past even data further

comprises selecting a subset of the past event data from the event database

(Cookmeyer, col. 22 line 61 – 23 line 7 and col. 24 lines 44 - 64); mining a subset of the

past even data to discover one or more patterns using a mining tool (Ma, pg. 4 section

2, algorithm 1), generating a visualization of the one or more patterns using a

visualization tool (Cookmeyer, col. 22 lines 50 - 63 and col. 24 lines 44 - 64), the analyst

reviewing the visualization to determine whether there are any patterns of interest

presented therein (Cookmeyer, col. 22 lines 50 - 63 and col. 24 lines 44 - 64), and

performing an appropriate action where a pattern of interest is found (Cookmeyer, col.

24 lines 44 – 64);

wherein validation of the one or more rules further comprises selecting a subset

of the past event data from the event database (Ma, pg. 4, paragraphs 3 and 4), finding

one or more instances of patterns expressed in terms of left-hand side rules (Ma, pg. 2,

paragraphs 2 and 3), generating a visualization of the one or more pattern instances

using a visualization tool (Ma, pg. 2, paragraphs 3 and 4), analyzing the left-hand side

rules using a rule validation tool (Ma, pg. 1, Fig. 1), displaying the results of the analysis

operation (Ma, Fig. 3), the analyst assessing the analysis results (Ma, pg. 3, 1st

paragraph) and making the rules as one of validated and not validated based on the

assessment of the analyst (Ma, pg. 9, Fig. 6);

wherein construction of the one or more rules further comprises selecting a

subset of the past event data from the event database (Ma, pg. 6, paragraph 2), mining

the subset of the past event data to discover the one or more patterns using a mining

tool (Ma, pg. 6 paragraph 3), assessing significance of the one or more patterns using a

visualization tool (Ma, pg. 2, paragraph 3 and pg. 3 paragraph 2), constructing the one

or more rules from a selected subset of the one or patterns using a rule construction

tool (Ma, pg. 3, paragraph 3), and writing the one or more rules in a rule database (Ma,

Fig. 1 and pg. 2 paragraph 2).

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. FRINK whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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